UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/445,139	12/02/1999	CHANGSHENG XU	U-012452-9	9532

7590 10/28/2003

LADAS & PARRY
26 WEST 61ST STREET
NEW YORK, NY 10023

EXAMINER	
ZAND, KAMBIZ	
ART UNIT	**PAPER NUMBER**
2132	

DATE MAILED: 10/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/445,139	Applicant(s) XU ET AL.	
	Examiner Kambiz Zand	Art Unit 2132	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 December 1999* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-68* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,10-20,24-34,38-43,45,51,53-59 and 61-68* is/are rejected.

7)☒ Claim(s) *7-9,21-23,35-37,44,52 and 60* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 December 1999* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *5,8* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. **Claims 1-68** have been examined.

Information Disclosure Statement PTO-1449

2. The pages of the all references submitted by applicant have been considered.

Drawings

3. Figures 7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

5. Claims 3, 17 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 3, 17 and 31, the "wherein.." phrases makes the claims indefinite and unclear in that neither means nor interrelationship of means are set forth in these claims in order to achieve the desired results expressed in the "wherein..." phrases.

In claims 3, 17 and 31, the "wherein.." phrases makes the claims indefinite and unclear in that neither method steps nor interrelationship of method steps are set forth in these claims in order to achieve the desired results expressed in the "wherein..." phrases.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. **Claims 1-6, 10-20, 24-34, 38-43, 45-51, 53-59 and 61-67** are rejected under 35 U.S.C. 103(a) as being unpatentable over Moskowitz et al (6,522,767 B1) in view of Applicant Admittance Prior Art (AAPA).

As per claims 1, 14-15, 28-29, 42-43, 50-51, 58-59 and 66-67 Moskowitz et al (6,522,767 B1) teach an apparatus, a computer program product and method of embedding and extracting a digital watermark in digital audio data coded using a synthesizer-architecture format, said method including the steps of: embedding and extracting at least a portion of said digital watermark in sample data (see abstract; col.5,

lines 23-37; col.6, lines 23-49; also see col.4-14 for detailed description) but do not disclose watermarking of articulation parameters of said synthesizer-architecture wavetable WT) format. However AAPA teach articulation parameters of said synthesizer-architecture format as prior art (see page 2, lines 14-23 where synthesizer-architecture wavetable (WT) format is described as becoming a new standard in musical industry). It would have been obvious to one of ordinary skilled in the art at the time the invention was made to utilize AAPA's synthesizer-architecture format in addition to Moskowitz's featured-based digital watermarking that relates not to one sample such as data sampling but on multiple samples (such as data sampling and synthesizer-format sampling; etc..) as described in col.5, lines 23-26 in order to watermark a digital signal or data.

As per claims 2, 16 , 30, 45, 53 and 61 Moskowitz et al (6,522,767 B1) teach an apparatus, a computer program product and the method according to claims 1, 15, 29, 43, 51 and 60 further including the step of adaptively coding said digital watermark in said sample data (see col.12, lines 45-47).

As per claims 3, 17 and 31 Moskowitz et al (6,522,767 B1) teach an apparatus, a computer program product and the method according to claims 2, 16 and 30, wherein redundancy adaptive coding is used based on a finite automaton (see col.12, line 47).

As per claims 4, 18 and 32 Moskowitz et al (6,522,767 B1) teach an apparatus, a computer program product and the method according to claims 1, 15 and 29, further including the step of hiding said digital watermark in said articulation parameters by creating virtual parameters (see col.10, lines 23-28).

As per claims 5, 19 and 33 Moskowitz et al (6,522,767 B1) teach an apparatus, a computer program product and the method according to claims 4, 18 and 32, further including the step of embedding said digital watermark in said virtual parameters (see col.10, lines 23-42).

As per claims 6, 20 and 34 Moskowitz et al (6,522,767 B1) teach an apparatus, a computer program product and the method according to claims 4, 18 and 32 further including the step of extracting one or more coded bits from watermarked sample data, said virtual parameters created dependent upon a watermarked coded bit sequence (see col.14, lines 26-49).

As per claims 10, 24 and 38 Moskowitz et al (6,522,767 B1) teach an apparatus, a computer program product and the method according to claims 4, 18 and 32, further including the step of encrypting said digital watermark (see col.3, lines 36-43).

As per claims 11, 25 and 39 Moskowitz et al (6,522,767 B1) teach an apparatus, a computer program product and the method according to claims 1,15 and 29, further including the step of generating said digital watermark (see col3, lines 36-43).

As per claims 12, 26, 40, 48, 56 and 64 Moskowitz et al (6,522,767 B1) teach an apparatus, a computer program product and the method according to claims 1, 15 and 29, further including the step of dividing said digital audio data coded using a architecture-architecture format into said sample data and said articulation parameters (see col.5, lines 22-26 where different samples represent different divided parameters before the watermarking or after).

As per claims 13, 27, 41, 49, 57 and 65 and Examiner takes an official notice that embedding and extracting a playback control signal is well known in the art of multimedia, video and audio cryptography.

As per claims 46, 54 and 62 Moskowitz et al (6,522,767 B1) teach an apparatus, a computer program product and the method according to claims 45, 53 and 61, further including the step of decrypting said adaptively coded bit sequence (see col.3, lines 10-17).

As per claims 47, 55 and 63 Moskowitz et al (6,522,767 B1) teach an apparatus, a computer program product and the method according to claims 43, 51 and 59, further including the step of decrypting said digital watermark (see col.3, lines 10-17).

8. **Claim 68** is rejected under 35 U.S.C. 103(a) as being unpatentable over Moskowitz et al (6,522,767 B1) in view of Applicant Admittance Prior Art (AAPA) and further in view of Rhoads (6,411,725 B1).

9. **As per claim 68** Moskowitz et al (6,522,767 B1) teach an apparatus, a computer program product and method of embedding and extracting a digital watermark in digital audio data coded using a synthesizer-architecture format, said method including the steps of: embedding and extracting at least a portion of said digital watermark in sample data (see abstract; col.5, lines 23-37; col.6, lines 23-49; also see col.4-14 for detailed description) but do not disclose watermarking of articulation parameters of said synthesizer-architecture wavetable WT) format. However AAPA teach articulation parameters of said synthesizer-architecture format as prior art (see page 2, lines 14-23 where synthesizer-architecture wavetable (WT) format is described as becoming a new standard in musical industry). It would have been obvious to one of ordinary skilled in the art at the time the invention was made to utilize AAPA's synthesizer-architecture format in addition to Moskowitz's featured-based digital watermarking that relates not to one sample such as data sampling but on multiple

samples (such as data sampling and synthesizer-format sampling; etc..) as described in col.5, lines 23-26 in order to watermark a digital signal or data but Moskowitz et al (6,522,767 B1) in view of Applicant Admittance Prior Art (AAPA) do not disclose the relationship between control signal and number of playback and decrementing the numbers according to number of playback. However Rhoads (6,411,725 B1) teach the relationship between control signal and number of playback and decrementing the numbers according to number of playback (see col.6, lines 15-19; col.7, lines 16-21 where by superimposing a number, the number of playback is being controlled ant having a counter to track the numbers of playback by decrementing or incrementing is an integral part of such a control signal). It would have been obvious to one of ordinary skilled in the art to utilize Rhoads's number of playback superimposing in Moskowitz's watermarking technique in view of AAPA's synthesizer-architecture wavetable (WT) format in order to control the number of playback of the audio file based on provider's copy protection rules and regulation.

Allowable Subject Matter

Claims 7-9, 21-23, 35-37, 44, 52 and 60 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S.Patent No. US (6,208,745 B1) teach method and apparatus for imbedding a watermark into a bitstream representation of a digital image sequence.

U.S.Patent No. US (6,209,096 B1) teach method and device for strong main information with associated additional information incorporated therein.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kambiz Zand whose telephone number is (703) 306-4169. The examiner can normally reached on Monday-Thursday (8:00-5:00). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (703) 305-1830. The fax phone numbers for the organization where this application or proceeding is assigned is as follows:

Official (703) 872-9306

Kambiz Zand
10/18/03

GILBERTO BARRON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100